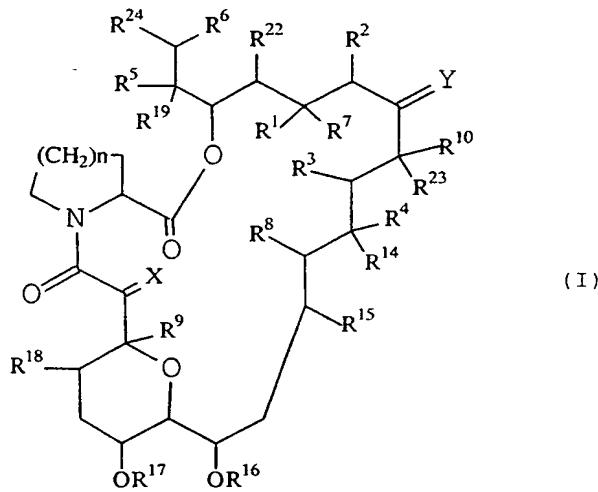


CLAIMS

1. A use of an immunosuppressant as MMP-production inhibitor.
2. The use of Claim 1, in which the immunosuppressant is macrolides of the following formula (I).



(wherein each of adjacent pairs of R¹ and R², R³ and R⁴, and R⁵ and R⁶ independently

(a) is two adjacent hydrogen atoms, but R² may also be an alkyl group or

(b) may form another bond formed between the carbon atoms to which they are attached;

R⁷ is a hydrogen atom, a hydroxy group, a protected hydroxy group, or an alkoxy group, or an oxo group together with R¹;

R⁸ and R⁹ are independently a hydrogen atom or a hydroxy group; R¹⁰ is a hydrogen atom, an alkyl group, an alkyl group substituted by one or more hydroxy groups, an alkenyl group, an alkenyl group substituted by one or more hydroxy groups, or an

alkyl group substituted by an oxo group;

X is an oxo group, (a hydrogen atom and a hydroxy group), (a hydrogen atom and a hydrogen atom), or a group represented by the formula -CH₂O-;

Y is an oxo group, (a hydrogen atom and a hydroxy group), (a hydrogen atom and a hydrogen atom), or a group represented by the formula N-NR¹¹R¹² or N-OR¹³;

R¹¹ and R¹² are independently a hydrogen atom, an alkyl group, an aryl group or a tosyl group;

R¹³, R¹⁴, R¹⁵, R¹⁶, R¹⁷, R¹⁸, R¹⁹, R²² and R²³ are independently a hydrogen atom or an alkyl group;

R²⁴ is an optionally substituted ring system which may contain one or more heteroatoms;

n is an integer of 1 or 2; and

in addition to the above definitions, Y, R¹⁰ and R²³, together with the carbon atoms to which they are attached, may represent a saturated or unsaturated 5- or 6-membered nitrogen, sulfur and/or oxygen containing heterocyclic ring optionally substituted by one or more groups selected from the group consisting of an alkyl, a hydroxy, an alkoxy, a benzyl, a group of the formula -CH₂Se(C₆H₅), and an alkyl substituted by one or more hydroxy groups,

or a pharmaceutically acceptable salt thereof.

3. MMP-production inhibitor, which comprises an immunosuppressant as an active ingredient.

4. A method for inhibiting a production of MMPs, which comprises administering an immunosuppressant.
5. A use of an immunosuppressant for manufacturing a medicament for preventing or treating MMP-mediated diseases.
6. A method for preventing or treating MMP-mediated diseases, which comprises administering an immunosuppressant to mammals.
7. A pharmaceutical composition for preventing or treating MMP-mediated diseases, which comprises an immunosuppressant in admixture with a carrier or excipient.
8. The immunosuppressant used in Claims 1 to 7 is tacrolimus, cyclosporin A or 33-epi-chloro-33-desoxyascomycin.
9. A use, prophylactic or therapeutic agent, method, pharmaceutical composition or process substantially as hereinbefore described as being in accordance with the present invention.